

state or a setting mode for setting various data or a set key for determining a setting value,  
characterized in that there are provided

a manual pulse generator for manually rotating a handle operable to generate a one or  
more command pulse, pulses;

pulse input means for measuring a pulse receiving the command pulses outputted from  
this said manual pulse generator and calculating the an amount of change in the pulse received  
command pulses per unit time; and

control panel control means for calculating the output frequency based on the amount of  
change in the pulse command pulses per unit time outputted from this said pulse input means.

2. (Currently Amended) A control apparatus as defined in claim 1, characterized in that  
the wherein the operation modes comprise at least a setting mode in which the frequency setting  
value can be changed and wherein further, said control panel control means can is operable to  
perform setting operations when data is outputted from the said pulse input means even in the  
case that the operation modes are when the selected operation mode is a mode other than the  
setting mode.

3. (Currently Amended) A control apparatus as defined in claim 1, characterized in that  
the wherein said control panel control means is constructed so as operable to change a scaling  
factor of the an amount of change in of the frequency setting value to the amount of change in

the ~~pulse~~ command pulses in response to the amount of change in the ~~pulse~~ command pulses per unit time.

4. (Currently Amended) A control apparatus as defined in claim 3, ~~characterized in that~~ it is constructed so as to maintain the just previous wherein the scaling factor of the amount of change in the frequency setting value to the amount of change in the pulse is held constant for a ~~constant~~ fixed period of time after stopping the operation of the said manual pulse generator is stopped.

5. (Currently Amended) A control apparatus as defined in claim 1, ~~characterized in that~~ it is constructed so as to make wherein a setting value is set by operating the said manual pulse generator ~~valid~~ after an input of the a set key has been selected on said key group.

6. (New) A control device for controlling a frequency property of a device under control, the control device comprising:

an operating component operable to display operational properties of the device under control, input control parameters, and output property control signals, wherein said operating component comprises a manual pulse generator operable to generate a control pulse signal comprising pulses with a frequency determined by a rotation amount of the manual pulse generator; and,

a control circuit operable to receive the property control signals and generate frequency property control signals based thereon for controlling the frequency property of the device under control and output display signals to said operating component, wherein said control circuit comprises a pulse input device operable to receive the control pulse signal and determine a change in the frequency of the pulses.

91  
B1  
cm+  
7. (New) A control device as set forth in claim 6, wherein the change in frequency of the pulses of the control pulse signal is used to generate the frequency property control signals.

8. (New) A method of controlling a frequency set value of a device under control, the method comprising:

- a. determining an operation mode;
- b. determining whether a pulse generator is generating pulses;
- c. if it is determined in (a) that the operation mode is monitor mode and it is determined in (b) that the pulse generator is generating pulses, modifying the operation mode to be frequency setting mode;
- d. determining a change in frequency with respect to the pulses;
- e. modifying the frequency set value for the device under control based on the change in frequency.

9. (New) A method as set forth in claim 8, further comprising:

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appl. No. 09/857,020

f. if it is determined in (a) that the operation mode is frequency setting mode and it is determined in (b) that the pulse generator is not generating pulses, determining whether a predetermined amount of time has elapsed since the pulse generator stopped generating pulses.

al  
and  
sh

10. (New) A method as set forth in claim 9, further comprising:

g. if it is determined in (f) that the predetermined amount of time has elapsed, modifying the operation mode to monitor mode.

---

---